Claims

[c1] 1.A composition comprising:

a polyphenylene ether resin, and

a dendritic polymer having a melt viscosity of 1 to 250 Pa at a temperature of 110 ° C and a shear rate of 30 sec^{-1}.

[c2] 2.The composition of claim 1, wherein the polyphenylene resin is poly(2,6-dimethyl-1,4-phenylene)ether resin or a copolymer of 2,6-dimethyl-phenol and 2,4,6-dimethyl phenol.

[c3] 3.The composition of claim 1, wherein the polyphenylene ether resin has an intrinsic viscosity of more than 0.2 dl/g as measured in chloroform at 25 ° C, and the composition contains 30 wt% or less of the dendritic polymer.

[c4] 4.The composition of claim 1, which comprises 10 wt% or less of the dendritic polymer.

[c5] 5.The composition of claim 1, which comprises 6 wt% or less of the dendritic polymer.

[c6] 6.The composition of claim 1, which comprises 4 wt% or less of the dendritic polymer.

[c7] 7.The composition of claim 1, which comprises 2 wt% or less of the dendritic polymer.

[c8] 8.The composition of claim 1, wherein the dendritic polymer is of a starburst configuration and comprises polyester branching units bound to a core.

[c9] 9.The composition of claim 8, wherein the polyester branching units of the dendritic polymer have epoxy groups or hydroxy functional groups.

[c10] 10.The composition of claim 9, where in the epoxy or hydroxy groups are at the periphery of the dendritic polymer.

[c11] 11.The composition of claim 9, where a portion of the epoxy or hydroxy groups on the dendritic polymer are reacted to provide chain termination or functional

groups.

[c12] 12.The composition of claim 1, wherein the dendritic polymer comprises chain extenders.

[c13] 13.The composition of claim 12, wherein the chain extenders have at least two hydroxyl groups and are selected from the group consisting of α , α -bis (hydroxymethyl)-propionic acid, α , α -bis(hydroxymethyl)-butyric acid, α , α , α -tris(hydroxymethyl)-acetic acid, α , α -bis(hydroxymethyl)-bularic acid, α , α -bis(hydroxymethyl)-propionic acid, α , β -dihydroxypropionic acid, heptonic acid, citric acid, d- tartaric acid or l- tartaric acid, α -phenylcarboxylic acids and combinations comprising at least one of the foregoing chain extenders.

[c14] 14.The composition of claim 1, wherein the dendritic polymer has a weight average molecular weight, as determined by gel permeation chromatography, of 1,000 to 5,000.

[c15] 15.The composition of claim 1, which additionally comprises an alkenyl aromatic resin.

[c16] 16.The composition of claim 16, wherein the alkenyl aromatic resin comprises polystyrene homopolymers, copolymers of styrene, a rubber modified polystyrene, or high impact polystyrene.

[c17] 17.The composition of claim 1, which additionally comprises an impact modifier.

[c18] 18.The composition of claim 1, which additionally contains at least one additive selected from the group consisting of impact modifiers, flame retardants, plasticizers, antioxidants, fillers, reinforcing agents, stabilizers, antistatic agents, lubricants, colorants, dyes, pigments and flow modifiers.

[c19] 19.A composition comprising:
a polyphenylene ether resin, and
a dendritic polymer having asymmetric branches and a melt viscosity of 1 to 250 Pa at a temperature of 110 ° C and shear rate of 30 sec^{-1} .

[c20] 20.The composition of claim 19, wherein the polyphenylene resin is poly(2,6-dimethyl-1,4-phenylene)ether resin or a copolymer of 2,6-dimethyl-phenol and 2,4,6-dimethyl phenol.

[c21] 21.The composition of claim 19, wherein the polyphenylene ether resin has an intrinsic viscosity of more than 0.2 dl/g as measured in chloroform at 25 ° C, and the composition contains 30 wt% or less of the dendritic polymer.

[c22] 22.The composition of claim 19, which comprises 10 wt% or less of the dendritic polymer.

[c23] 23.The composition of claim 19, which comprises 6 wt% or less of the dendritic polymer.

[c24] 24.The composition of claim 19, which comprises 4 wt% or less of the dendritic polymer.

[c25] 25.The composition of claim 19, which comprises 2 wt% or less of the dendritic polymer.

[c26] 26.The composition of claim 19, wherein the dendritic polymer is of a starburst configuration and comprises polyester branching units bound to a core.

[c27] 27.The composition of claim 26, wherein the polyester branching units of the dendritic polymer have epoxy groups or hydroxy functional groups.

[c28] 28.The composition of claim 27, wherein the epoxy or hydroxy groups are at the periphery of the dendritic polymer.

[c29] 29.The composition of claim 26, where a portion of the epoxy or hydroxy groups on the dendritic polymer are reacted to provide chain termination or functional groups.

[c30] 30.The composition of claim 19, wherein the dendritic polymer comprises chain extenders.

[c31] 31.The composition of claim 30, wherein the chain extenders have at least two hydroxyl groups and are selected from the group consisting of α , α -bis

(hydroxymethyl)-propionic acid, α , α -bis(hydroxymethyl)-butyric acid, α , α , α -tris(hydroxymethyl)-acetic acid, α , α -bis(hydroxymethyl)-bularic acid, α , α -bis(hydroxymethyl)-propionic acid, α , β -dihydroxypropionic acid, heptonic acid, citric acid, d- tartaric acid or l- tartaric acid, α -phenylcarboxylic acids and combinations comprising at least one of the foregoing chain extenders.

[c32] 32.The composition of claim 19, wherein the dendritic polymer has a weight average molecular weight, as determined by gel permeation chromatography, of 1,000 to 5,000.

[c33] 33.The composition of claim 19, which additionally comprises an alkenyl aromatic resin.

[c34] 34.The composition of claim 33, wherein the alkenyl aromatic resin comprises polystyrene homopolymers, copolymers of styrene, a rubber modified polystyrene, or high impact polystyrene.

[c35] 35.The composition of claim 19, which additionally comprises an impact modifier.

[c36] 36.The composition of claim 19, which additionally contains at least one additive selected from the group consisting of impact modifiers, flame retardants, plasticizers, antioxidants, fillers, reinforcing agents, stabilizers, antistatic agents, lubricants, colorants, dyes, pigments and flow modifiers.